ADEQ Arizona Department of Environmental Quality

PUBLIC NOTICE

PROPOSED LEAKING UST (LUST) CASE CLOSURE

The Arizona Department of Environmental Quality (ADEQ) is considering closure of the following leaking underground storage tank (LUST) cases:

LUST Case File #:5530.01-.02	**Llantera El Cachanilla**
Facility ID # 0-008896	**986 W. 3rd Street**
Yuma County	**Yuma, Arizona 85364**

This commercial property (the Site) is located at 986 W. 3rd Street in Yuma. The Site operates as a tire shop (Llantera El Cachanilla). The Site was used as the former Baker Exxon and the UST owner/operator was identified as Baker Exxon. The three 3K gasoline USTs were installed at an unknown date and permanently closed in November 2008. LUST release .01 was assigned to the three 3K gasoline USTs, and LUST release .02 was assigned to the gasoline dispenser/DS-1 location. ADEQ's State Lead Unit on behalf of the property owner conducted corrective actions. Initial site characterization activities were conducted between October 2009 and June 2010 and included soil borings and the installation of four monitoring wells. Benzene, xylenes, trimethylbenzenes (TMBs) and naphthalene concentrations in soil exceeded the applicable regulatory standards. Groundwater samples also showed volatile organic compound (VOC) contamination concentrations that exceeded applicable regulatory standards.

The remediation approach included air sparge (AS) and soil vapor extraction (SVE) for groundwater and soil clean up, respectively. The AS/SVE system began operation in March 2011 and ran until February 2013. Three confirmation soil borings were installed in January 2016. The soil samples were analyzed for VOCs by EPA Method 8260B (including the AZ extended list), polyaromatic hydrocarbons (PAHs), and tetraethyl lead (TEL). Most of the contaminants in soil and groundwater have decreased as a result of remediation. Groundwater sampling results showed significant decrease of contamination as of January 2017.

Current data provided by EEC, contractor to the State Lead Unit, and all other available site information has been used by ADEQ to determine whether remaining levels of contaminants at the site are adequately protective of human health and the environment. A site specific risk assessment and detailed file/information search were also completed. VOC analytical groundwater results in MW-1 show that benzene concentrations remain above the applicable Tier 1 Corrective Action Standard of 5.0 µg/L. The results for all other monitoring wells show no contamination present and is available in the LUST file.

Based upon the results of remedial activities and site specific information, the above-referenced LUST site is eligible for alternative LUST closure under Arizona Revised Statutes (A.R.S.) §49-1005(E). Arizona Administrative Code (A.A.C.) R18-12-263.04 allows case closure of a LUST site with groundwater contamination above the Arizona Aquifer Water Quality Standards (AWQS) or Tier 1 Corrective Action Standards. ADEQ has considered the results of a site specific assessment and the rule specific criteria below:

1. *Threatened or impacted drinking water wells*: According to the Arizona Department of Water Resources (ADWR) records, there are 127 registered wells within ½ mile of the site. Of these registered wells, four are exempt and 14 are non-exempt. There are 97 monitoring wells and 17 wells

registered as other. There are no domestic or municipal use wells located near the site within ½ mile. There are no exempt wells located within ¼ mile of the site, and one non-exempt well (55-507883) used by the Bureau of Reclamation for drainage. According to the Well Registry Report, this well is not located within 500 feet of the LUST site. According to the City of Yuma's webpage, their primary water supply is the Colorado River delivered through the facilities of the Yuma County Water Users Association and the Gila Gravity Canal System. According to the ADWR webpage, 1st Priority Rights to Colorado River water (Satisfaction of Present Perfected Rights as defined in the Arizona v. California decree) includes the Yuma County Water Users' Association and the City of Yuma. With two water treatment locations, the Main Street Water Treatment Plant can produce up to 40 million gallons daily (mgd), and the Agua Viva Water Treatment Facility can produce up to 20 mgd. The Main Street Water Treatment Plant has been producing drinking water for the Yuma area since 1892. According to the ADWR *List of Municipal Water Providers Designated as Having an Assured or Adequate Water Supply* dated January 4, 2018, City of Yuma is DWR 40-900019.00. Any new or replacement well located at or near this site would need to meet the criteria of A.A.C. R12-18-1302 (B) (3). ADEQ sent out a Water Provider Questionnaire to the water provider with the request that it be completed and returned within 30 days. ADEQ did not receive a response.

2. *Other exposure pathways*: Soil samples from 5, 10, and 14 feet from three confirmation soil borings that were installed in January 2016. No VOCs, PAHs or TEL was detected above an applicable residential Soil Remediation Level (rSRL). Most of the VOC, and TEL data reported concentrations less than the laboratory reporting limits. To evaluate any potential inhalation risk a shallow soil vapor survey was conducted. The risk assessment was performed by ADEQ. The risk assessment generally includes an evaluation of the compounds of concern (CoCs) associated with the fuel release and a separate evaluation of any non-petroleum related compounds. Chemicals were modeled for both the excess lifetime cancer risk value (ELCR) and the hazard index (HI) or non-carcinogenic health hazard. The soil vapor data was modeled using the on-line screening version of the Johnson and Ettinger (J&E) model forward calculation. Conservative residential parameters were used for evaluation of the building. The ELCR for the petroleum related CoCs is zero and the HI was less than 1. The ELCR for the PCE and chloroform contamination was 10^{-7} and the total HI is less than 1. These values demonstrate acceptable risk posed by any remaining VOC contamination in the shallow groundwater or the soils. Incidental dermal contact with the groundwater is considered *de minimis* risk. In a ¼ mile land use/receptor survey, there are no schools, day care centers, hospitals or other sensitive populations.

3. *Groundwater plume stability*: Groundwater plume stability is demonstrated by the remaining VOC contamination present over a regulatory standard is limited to MW-1. MW-1 is located 20 feet or greater away from the next closest monitoring well on site. No other on site monitoring wells currently shows VOC contamination present over a laboratory reporting limit. MW-4 has not had any VOC contamination present over an applicable regulatory standard since April 2011. MW-3 has not had any VOC contamination present over an applicable regulatory standard since December 2014. MW-2 has not had any VOC contamination present over an applicable regulatory standard since May 2014. The groundwater plume does not extend off site based on groundwater data collected from MW- 2 and MW-4 which are located on site the farthest away from MW-1. The current benzene concentration is lower and at a depth similar to the depth recorded in 2009 when the benzene concentration was at its maximum.

4. *Characterization of the groundwater plume:* Historic groundwater data is available from 2009 to 2017 for the four monitoring wells. The historic high VOC concentrations were in 2009-2010. The depth to water is approximately 15 feet bgs. Dissolved-phase petroleum hydrocarbons have been characterized. MW-1 has had VOC contamination (benzene) present over an applicable regulatory standard off and on since November 2011. MW-1 is the only well that has VOC contamination present over an applicable regulatory standard. It appears that the benzene contamination is trapped in submerged soils, so the concentration will change as the groundwater elevation changes. To evaluate for groundwater closure the four monitoring wells were sampled and analyzed for VOCs, and PAHs in May 2016. Only MW-1 had a benzene concentration that exceeded an applicable regulatory standard. The other three wells were non-detect for VOCs, and most PAHs. PAH concentrations were slightly above the laboratory reporting limits. In February 2017 MW-1 showed benzene at 43 µg/L. The depth to groundwater was 14.41 feet below ground surface (bgs) in MW-1.

5. *Natural Attenuation*: The groundwater plume has not migrated off site as demonstrated by the benzene contamination present only in MW-1 (source well). VOC contamination has not migrated more than 30 feet from the source well. Groundwater field data shows that natural attenuation is occurring as biodegradation. Benzene will continue to degrade under aerobic (preferred) or anaerobic groundwater conditions.

6. *Removal or control of the source of contamination*: Source control has been completed by the UST system being permanently closed in August 1998. The remedial system removed approximately 44,431 pounds of gasoline range organics. The secondary source of hydrocarbons remaining in soil and groundwater has been effectively reduced through the use of the remedial system.

7. *Requirements of A.R.S. §49-1005(D) and (E):* The results of the corrective action completed at the site assure protection of public health, welfare and the environment, to the extent practicable, the clean-up activities competed at this site allow for the maximum beneficial use of the site, while being reasonable, necessary and cost effective.

8. *Other information that is pertinent to the LUST case closure approval*: The facility and LUST files were reviewed for information regarding prior cleanup activities, prior site uses and operational history of the UST system prior to removal.

Groundwater data for MW-1

Date	Benzene AWQS is 5 µg/L	Depth to water (feet)
11/17/2009	230	14.93
1/12/2010	23	15.25
7/1/2010	1.4	13.64
7/28/2011	<1.0	14.29
1/4/2012	46	14.37
5/2/2012	69	14.09
8/22/2012	<1.0	13.27
11/8/2012	9.8	13.89
2/21/2013	54	14.33
8/14/2013	1.6	13.69
8/27/2014	<1.0	13.50
2/11/2016	19.3	14.80
5/2/2016	66.2/63/7	14.87
1/24/2017	43.8	14.41

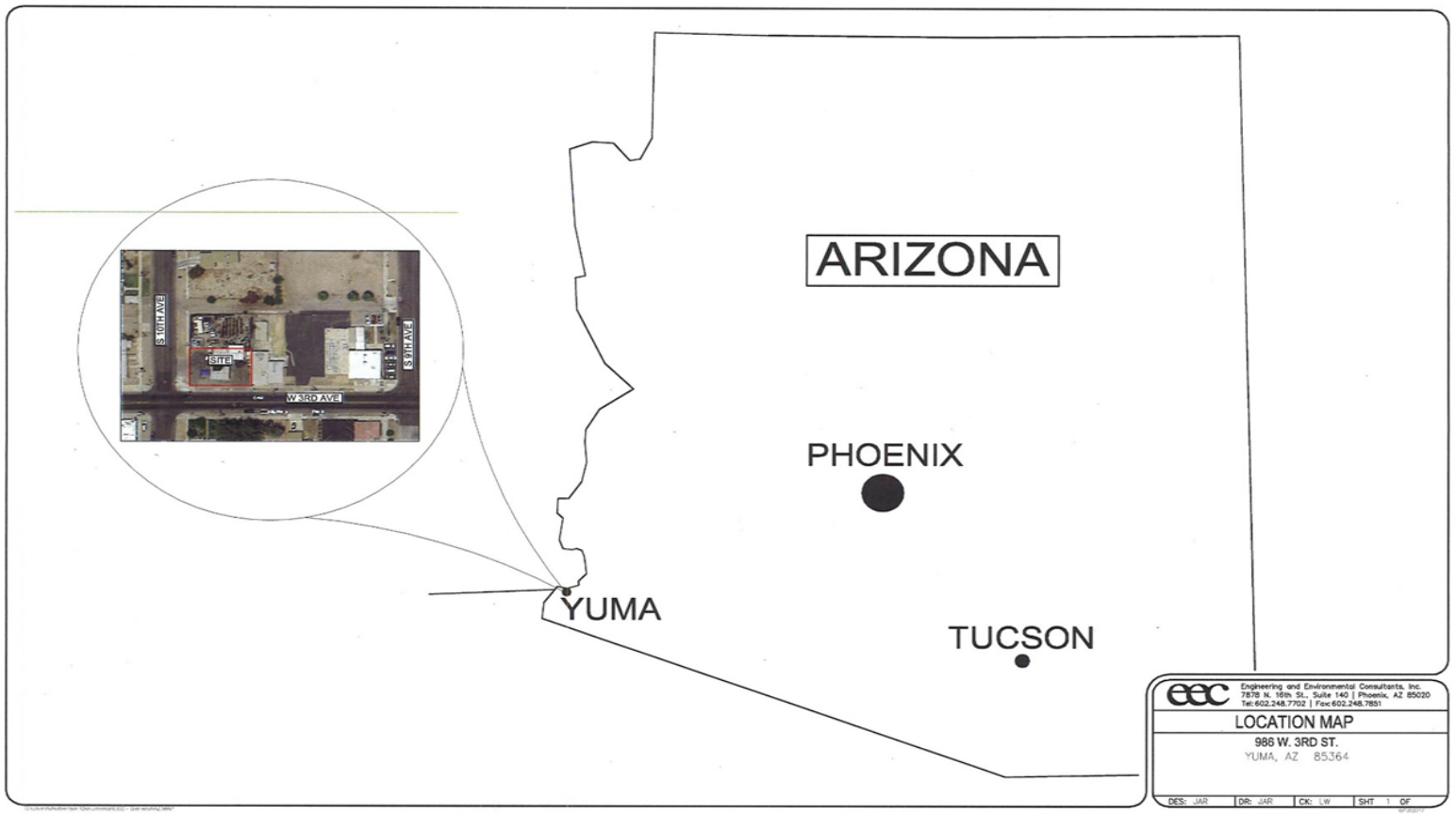
Site specific information concerning this closure is available for review during normal business hours at the ADEQ Records Center http://www.azdeq.gov/function/assistance/records.html , 1110 W. Washington St., Suite 140, Phoenix, AZ 85007. ADEQ welcomes comments on the proposed LUST case closure. Please call the Records Center at 602-771-4380 to schedule an appointment. A 30-day public comment period is in effect **commencing March 13, 2018 and ending April 13, 2018**. Comments should be submitted in writing to the Arizona Department of Environmental Quality, Waste Programs Division, and Attention: Rick Brunton, 1110 W. Washington Street, Phoenix, AZ 85007.

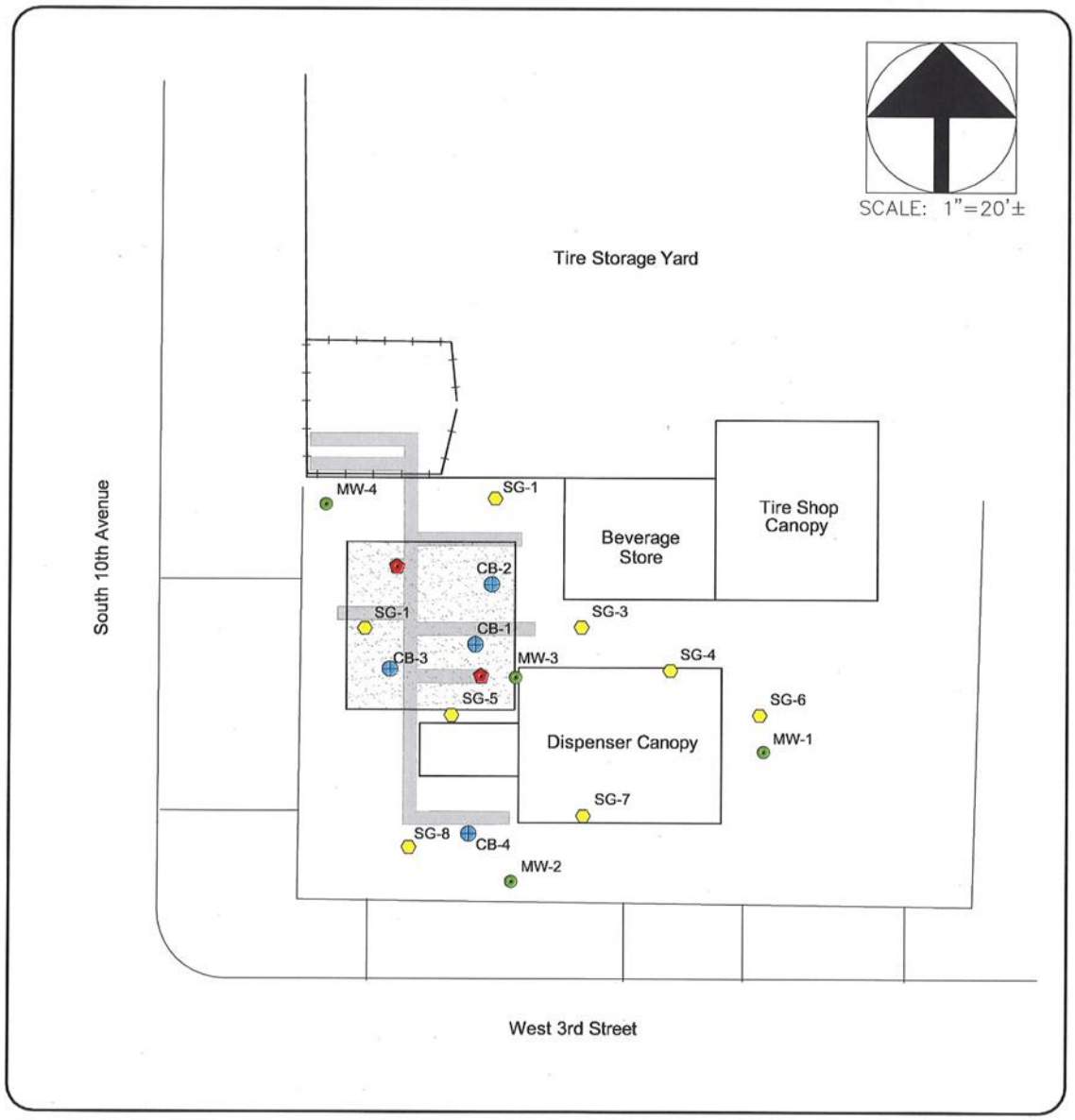
If sufficient public interest is demonstrated during the public comment period, ADEQ may announce and hold a public meeting. ADEQ will consider all submitted written comments and reserves the right to respond to those comments following the public comment period. For more information on this notice, please contact the Project Manager, Rick Brunton at (602) 771-4745 or at rlb@azdeq.gov or the Sr. Risk Assessor, Debi Goodwin at (602) 771-4453 or at dg1@azdeq.gov.

Copies of the cited statutes and rules can be found at:
http://www.azleg.gov/ArizonaRevisedStatutes.asp?Title=49, and
http://www.azsos.gov/public_services/Title_18/18-12.htm

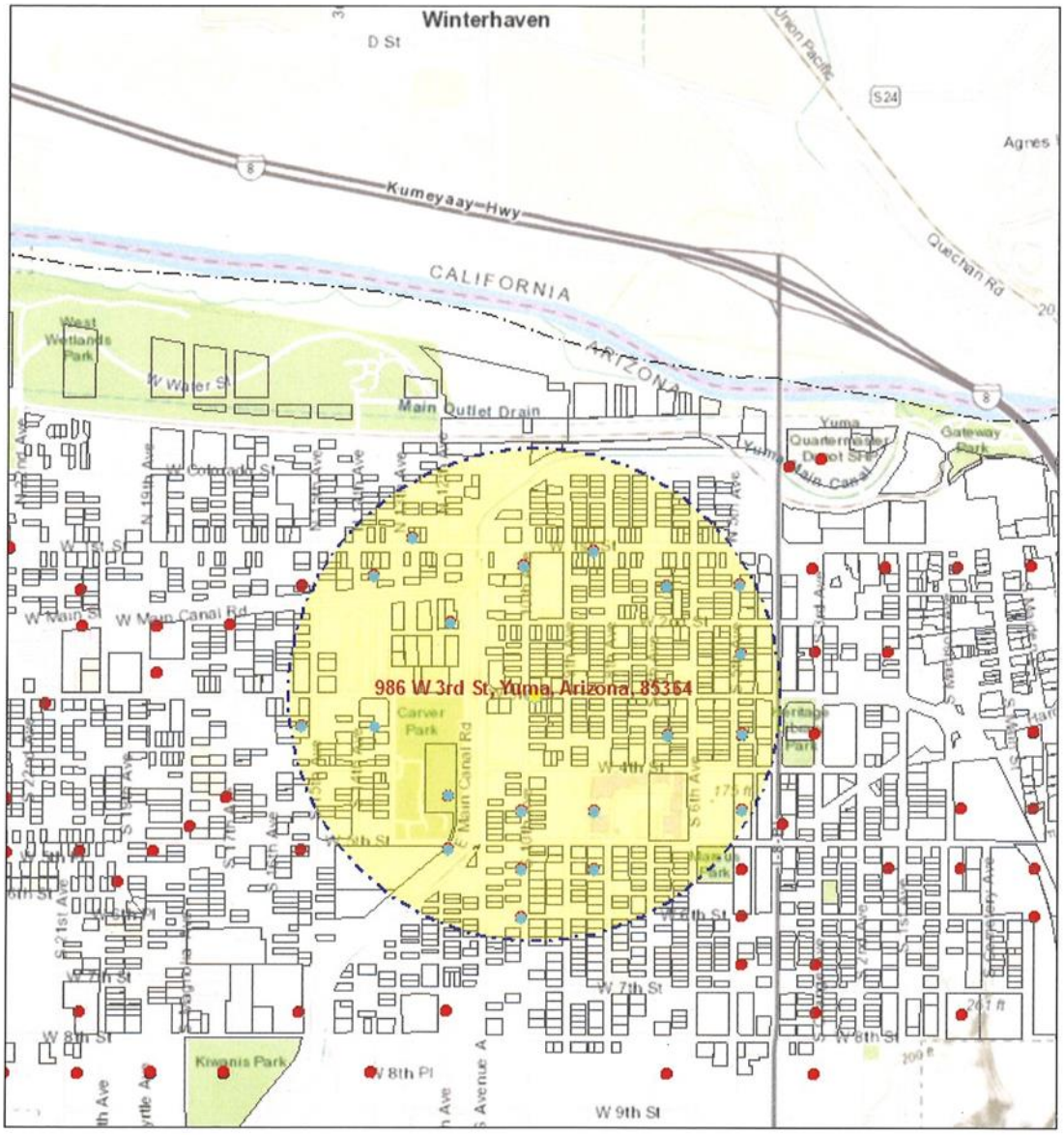
ADEQ will take reasonable measures to provide access to department services to individuals with limited ability to speak, write, or understand English and/or to those with disabilities. Requests for language interpretation services or for disability accommodations must be made at least 48 hours in advance by contacting: 7-1-1 for TDD; (602) 771-2215 for Disability Accessibility; or Ian Bingham, Title VI Nondiscrimination Coordinator at (602) 771-4322 or idb@azdeq.gov.

ADEQ tomará medidas razonables para proveer acceso a los servicios del departamento para personas con capacidad limitada para hablar, escribir o entender Inglés y / o para las personas con discapacidad. Las solicitudes de servicios de interpretación del lenguaje o de alojamiento de discapacidad deben hacerse por lo menos 48 horas de antelación poniéndose en contacto con Ian Bingham, Title VI Nondiscrimination Coordinator al (602) 771-4322 o idb@azdeq.gov.


ARIZONA
PHOENIX
YUMA
TUCSON
S 10TH AVE
S 9TH AVE
SITE
W 3RD AVE
Engineering and Environmental Consultants, Inc.
7878 N. 16th St., Suite 140 | Phoenix, AZ 85020
Tel: 602.248.7702 | Fax: 602.248.7851
LOCATION MAP
986 W. 3RD ST.
YUMA, AZ 85364
DES: JAR
DR: JAR
CK: LW
SHT 1 OF


SCALE: 1"=20'±
Tire Storage Yard
South 10th Avenue
MW-4
SG-1
Beverage Store
Tire Shop Canopy
CB-2
SG-1
SG-3
CB-1
CB-3
MW-3
SG-4
SG-5
SG-6
Dispenser Canopy
MW-1
SG-7
SG-8
CB-4
MW-2
West 3rd Street
LEGEND
Confirmation Borings
Soil Gas Sample Locations
Remediation Compound
SVE Wells
Air Sparge Wells
Estimated Groundwater Monitoring Well Locations
AVE-AS Trenches
Former Tank Pit
10 5 0 10
Feet
Engineering and Environmental Consultants, Inc.
7878 N. 16th St., Suite 140 | Phoenix, AZ 85020
Tel: 602.248.7702 | Fax: 602.248.7851
FIGURE 1
GROUNDWATER MONITORING SITE MAP
FORMER BAKER EXXON
986 W 3RD STREET, YUMA, ARIZONA
DES: LAW
DR: JAR
CK: JPB
SHT 1 OF 1
FILE NAME: V:10522.01-Baker Exxon Yuma (oldjob)/CADD/baker exxon boring.dwg
DATE PLOTTED: 01-28-16

Baker Exxon



March 1, 2018

- Well Registry
- County

1:18,056

0 0.15 0.3 0.6 mi

0 0.175 0.35 0.7 km

Arizona Department of Water Resources
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

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